FACT SHEET

This fact sheet is a companion document to the National Pollutant Discharge Elimination System (NPDES) Permit No. WA0040967. The Department of Ecology (the Department) is proposing to renew this permit; this will allow the continuance of discharge of wastewater to waters of the state of Washington.

This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions. Public involvement information is contained in Appendix A. Definitions are included in Appendix B. Site map and treatment system flow diagram are included in Appendix C.

GENERAL INFORMATION

Applicant:	Time Oil Co.
Facility Name and Address:	Time Oil Co. Property # 01-115/122 Treatment Facility 2818 NE Cherry Road, Vancouver, Washington
Type of Facility:	Ground Water Recovery and Treatment Facility
Discharge Location:	Burnt Bridge Creek, Tributary to Vancouver Lake
	Latitude: 45° 39' 04" N. Longitude: 122° 38' 39" W.

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I. BACKGROUND INFORMATION

A. DESCRIPTION OF THE FACILITY

The subject facility does not produce or distribute any products. The facility consists of a ground water recovery and treatment system constructed to recover and treat petroleum hydrocarbon impacted surface and ground water. The treatment facility compound (Cherry Road Facility) is built on private property at 2818 Cherry Road and the ground water recovery system extends between Cherry Road and 42nd Street. Petroleum contamination of water resulted from past releases from a leaking underground storage tank (LUST) system installed at the Handy Andy No. 8 gasoline service station, which is located at 3314 NE 44th Street in Vancouver, Washington (See Figure 1). The treatment facility is located approximately 1,800 feet southwest of the Handy Andy No. 8 service station. The treatment facility is anticipated to be a temporary project for remediation purposes only. Once surface and ground water cleanup is complete, the treatment system will be dismantled and removed from the site.

The elevation in the site vicinity ranges from approximately 237 feet above sea level at the service station (3314 N.E. 44th Street) to 165 feet at the ground water remediation compound (2818 N.E. Cherry Road), and approximately 85 feet at Burnt Bridge Creek.

Single-family residences are located to the northeast (up-gradient) of the facility, and Arnold Park is located to the southwest (down-gradient) of the facility. Arnold Park consists of unimproved land and includes Burnt Bridge Creek and a steeply sloping wooded area containing ground water discharge seeps and springs. (See Figure 2.)

1. History

The original service station was built in the mid 1970s by Mr. Larry Nelson and consisted of two 8,000 gallon gasoline underground storage tanks (USTs), service islands, and convenience store. Mr. Nelson owned the service station system and the property was owned by Mrs. Elsie Grooms. Mr. Randy Anderson bought the station system from Mr. Nelson in 1981 and named the station Handy Andy No. 8. After operating the station independently for a short term, Mr. Anderson entered into a special purpose business agreement (SPA) with Time Oil Co. to dispense leaded and unleaded gasoline. In September 1991, Time Oil Co. terminated the SPA with Mr. Anderson and removed the UST system. Mr. Anderson had three new unleaded gasoline tanks installed, reopened the station in November 1991, and continues to operate the station to date. Mr. Anderson purchased the property from Mrs. Grooms in August 1994.

Time Oil Co. discovered petroleum contaminated soil and ground water during tank removal activities in September 1991. Subsurface investigations of the site were conducted by Time Oil Co. and their consultants (Shannon & Wilson, Inc., Science & Engineering Analysis Corporation (SECOR), and AGRA Earth and Environmental) from 1991 to 1997. All environmental assessment activities performed to date have been documented in written reports and submitted to the Department. Results of these investigations confirmed that concentrations of gasoline constituents exceeded Washington state cleanup level guidelines for soil and for ground water at the project site.

Results of surface and subsurface investigations in the service station area confirmed that non-aqueous phase gasoline had migrated downward through the soil column and had impacted ground water. Aqueous and non-aqueous phase gasoline contaminants had traveled via ground water beyond the property boundary in a southwesterly direction for approximately 1,800 feet before surfacing and discharging into several seeps and springs. The seeps and springs are located along the surface of a 100 foot high bluff. The impacted seeps and springs contribute to two small tributaries that travel to the base of the bluff and empty into Burnt Bridge Creek. Property in the bluff area is either privately owned or owned by the City of Vancouver as Arnold Park.

Time Oil Co. entered into an agreed order in November 1993 with the Department to conduct an interim action. Simultaneously, enforcement orders were issued to Mr. Anderson and Mr. Nelson to conduct the same interim action.

In December 1993, Time Oil Co., with SECOR as its consultant, designed and installed an interim remediation system, which consisted of an interceptor trench, an oil/water separator, and a ground water remediation treatment facility. The treatment system was activated in February 1994. The interim system was built to collect gasoline contaminated ground water prior to discharging to the surface in the bluff area of the plume. Effluent water was discharged to the City of Vancouver sanitary treatment system until June 1998, at which date, Time Oil Co. began discharging the effluent stream to Burnt Bridge Creek under NPDES permit No. WA0040967.

The agreed order was amended in March 1995 to include the completion of a remedial investigation/feasibility study (RI/FS) for the project site. Simultaneously, Mr. Anderson and the Mr. Nelson were issued amendments to their respective enforcement orders for the completion of the same tasks. The RI/FS was finalized February 1999.

On April 4, 2000, Time Oil Co. entered into Consent Decree No. DE 99TC S-206 (Decree) with Ecology. Under the Decree, Time Oil Co., with AGRA Earth and Environmental as its consultant, completed a cleanup action plan (CAP) and the work described under the CAP on December 7, 2000. The work completed under the CAP expedited cleanup of gasoline contaminated soil and ground water for the entire site. The remedial system built at the Cherry Road Facility, is designed to capture ground water prior to it discharging to surface and therefore, eliminates impacts to any surface water that discharges as seeps and springs.

The work completed involved two major remedial actions. The first major action was to install an air-sparging and soil vapor extraction (AS/SVE) system in the station and mid-plume areas to collect gasoline contaminants from soil and ground water in the source area of the gasoline plume. A thermal/catalytic oxidation treatment facility (44^{th} Street Facility) was installed to treat the recovered gasoline vapor stream. Substantive requirements for an air permit were developed by Ecology that defined operation criteria and air effluent limitations for the facility.

The second major remedial action was the expansion of the ground water treatment Road

The NPDES permit only involves the effluent stream originating from the Cherry Road Facility. The facility is designed to collect and treat gasoline contaminated water that

flows to the facility from a ground water recovery vault. The vault collects the water streams from the interceptor trench and recovery wells.

The interceptor trench is 100 feet in length and 6 feet in depth and is designed to collect ground water prior to discharging to surface along the bluff area. Water containing dissolved gasoline contaminants is gravity drained to a ground water collection vault and pumped to a facility housing a treatment system. Ground water collected from the eight (8) recovery wells located along the bluff area, flows through a piping system that joins the interceptor trench ground water stream.

Calcium hypochlorite, as an anti-biofouling agent, is added to the collection vault at a rate of approximately one kilogram every two weeks. Analytical test results for chlorine both in the influent and effluent water have been routinely non-detect.

In the treatment facility, collected water flows through high-pressure granulated activated carbon (GAC) vessels, followed by a pass through low-pressure GAC vessels. The GAC in the high-pressure vessels are changed out upon detection of contaminant breakthrough. The low-pressure GAC vessels function as a polishing treatment. Effluent water discharged to Burnt Bridge Creek under NPDES permit No. WA 0040967. (See Figure 4.)

The maximum rate at which water is discharges to Burnt Bridge Creek is less than 129,600 gallons per day. The daily average discharge of treated water does not exceed an average 122,400 gallons per day per month. The flow rate was calculated using data collected from 42 months of operation of the facility. Confidence in the accuracy of the flow rate is supported by the technical data collected on the width, depth, and flow rate of the contaminated ground water plume. Recovery and treatment of ground water will be continuous while ground water flow is sufficient. This data is documented in written reports submitted to the Department.

The treatment system is housed in a completely enclosed building. It is automated to operate continuously. Failsafe controls have been installed and are designed to shut down the treatment system prior to stored fluid reaching a level which would result in a spill of recovered ground water. The control system also notifies Time Oil Co. and their consultants through telemetry systems in case of a treatment system shut down.

2. Discharge Outfall

The effluent stream flows through a four-inch pipe which extends from the treatment facility building to an outfall beside Burnt Bridge Creek. The only surface manifestations of the effluent pipeline are at the treatment facility building and the creek outfall.

The pipeline surfaces approximately 10 feet from Burnt Bridge Creek. It is connected to an outfall pipe assembly that directs the flow of water downward into a bed of drain rock. The drain rock fills a channel that leads from the outfall to the creek bank. A steel mesh cage is installed over the outfall pipe assembly to protect it from animals, vandalism, and

water borne debris during periods of high water. The base of the cage is secured in a slab of concrete. (See Figure 5 and 6.)

B. PERMIT STATUS

The NPDES Permit No. WA0040967 for the discharge of wastewater to Burnt Bridge Creek was issued on September 12, 1997 and was renewed for five years on June 30, 1998. A 'Statement of Basis for the Modification of a Wastewater Discharge Permit' was written September 27, 2000 and approved by the Department. The reason for the modification of the permit at that time was to accommodate for an increase in discharge to Burnt Bridge Creek. The ground water flow increase was caused by the addition of ground water flow from eight recovery wells and associated piping installed along the top of the bluff. The higher flow rate began January 2001 with the activation of the newly modified system.

Permission to continue to discharge to Burnt Bridge Creek until June 30, 2008 will be granted by the Department upon renewal of the LUST NPDES permit.

C. WASTEWATER CHARACTERIZATION

Since the beginning of operation of the `ground water` recovery and treatment system, Time Oil Co. has conducted influent and effluent sampling events quarterly. Effluent was discharged to the City of Vancouver sanitary sewer system from February 1994 until June 1998. After June 1998, the effluent water was discharged to Burnt Bridge Creek. Influent and effluent samples were analyzed for the parameters and the priority pollutants listed below. Quarterly ground water monitoring reports have been written and submitted to the Department since March 1994.

Influent and effluent wastewater was characterized for six parameters (flow, pH, benzene, total BTEX, TPH-G, and lead). Average data for these parameters before and after treatment are displayed in the table below: These data are based on 42 months of testing.

Parameter	Before Treatment	After Treatment
Flow	NA[a]	12,000 gpd[b]
pH	NA	7.3
Benzene	266 ppb	<0.5 ppb
Total BTEX	1,258 ppb	2.9 ppb
TPH-G	8,774 ppb	51.8 ppb
Lead	3.31 ppb	2.4 ppb

[a]NA = Not Applicable
[b]gpd = gallons per day

D. SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

During the history of the previous permit, the Permittee has remained in substantial compliance based on Discharge Monitoring Reports (DMRs) submitted to the Department. Refer to the table in section C. and the charts exhibited in Figures 7 and 8.

As seen in the table presented in C., compliance has been demonstrated with the permit requirements for flow, pH, benzene, total BTEX, and TPH-G criteria. Compliance with the flow and pH criteria is demonstrated graphically in Figures 7 and 8. Because analytical test results for lead, BTEX, and TPH-G were consistently below detection limits or at very low levels, and because of an established mixing zone, analytical results for these compounds were not presented graphically.

E. SEPA COMPLIANCE

The ground water treatment system was reviewed under the State Environmental Policy Act (SEPA) process November 1996 and was issued a Determination of Nonsignificance by the Department.

II. PROPOSED PERMIT LIMITATIONS AND CONDITIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC) or Sediment Quality Standards (Chapter 173-204 WAC or the National Toxics Rule (Federal Register, Volume 57, No. 246). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

A. PROPOSED EFFLUENT LIMITATIONS

The following effluent limitations have been proposed for this permit:

PARAMETER	LIMITATION (Daily Maximum)	BASIS FOR LIMITATION
Flow	129,600 gpd	Permit Application
pH	6-9 S.U.	Technology-based
Benzene	5.0 ppb	Technology-based
Total BTEX	100 ppb	Technology-based
TPH-G (w/detectable	800 ppb	AKART[a]

PARAMETER	LIMITATION (Daily Maximum)	BASIS FOR LIMITATION
benzene)		
TPH-G (w/o detectable benzene)	1,000 ppb	AKART[a]

[a] AKART = All Known, Available and Reasonable Methods of Treatment.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Motor gasoline is composed of many types of hydrocarbons. The individual constituents have various solubilities, vapor pressures, and toxic effects. The treatment system employed removes the constituents at various rates and so certain constituents have been chosen to be monitored due to their relative abundance and usefulness as measures of the success of treatment. These parameters are called indicator chemicals for this process. A discussion of the factors which support the use of the indicators is available in the EPA Model Permit Fact Sheet for LUST cleanups.

The indicator parameters in discharges from gasoline cleanup projects include benzene, ethylbenzene, toluene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH).

Federal effluent guidelines have not been promulgated for wastewater discharges resulting from underground storage tank cleanups. Consequently, the technology-based effluent limits of this permit have been developed on a best professional judgment (BPJ) basis in accordance with 40 CFR 125.3. The requirement that all wastewater permits issued by the state of Washington impose all known, available and reasonable methods of control and treatment of pollutants (AKART) is satisfied for this permit through the determination of BPJ limits.

The permit includes the following technology-based effluent limitations for ground water recovery and treatment projects using granulated activated carbon (GAC), one of the most cost-effective and widely used treatment technologies available for removing gasoline from ground water. The limitations assume a 99.5 percent removal rate.

Parameter	Limit (Daily Maximum)
Benzene	5.0 ppb
Total BTEX	100 ppb

In addition, EPA recommends limiting pH to the widely accepted range of 6 to 9 standard units established for most industrial point source discharges.

Limitations for TPH are based on the applicability of AKART. The Toxic Cleanup Program of the Department has established that treatment system performance from similar cleanup operations has resulted in pollutant discharge concentrations which meet these limits.

The regulation which authorizes discharges to the waters of the state of Washington, WAC 173-220, requires that all discharges from point sources apply AKART to reduce the concentrations of pollutants. The treatment methods employed at this facility satisfy this requirement. The limitations expressed in this permit have been consistently met at similar treatment facilities under similar conditions. Industrial-based data for treatment efficiencies associated with these types of cleanups demonstrates that the limits based on this treatment are available and economically reasonable.

C. SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state.

1. Numerical Criteria

"Numerical" water quality criteria are numerical values set forth in the Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC). They specify the levels of pollutants allowed in receiving water while remaining protective of aquatic life. They specify the allowable levels of potential pollutants in receiving water. Numerical criteria for petroleum hydrocarbons and lead are among the criteria contained in the Water Quality Standards.

Numerical criteria set forth in the Water Quality Standards are used to derive the effluent limits in a discharge permit. When water quality-based limits are more stringent or potentially more stringent than technology-based limits, they must be used in a permit.

The Department has determined that the treatment system in place constitutes AKART for this discharge. This system has a limited effectiveness in removing lead at the dilute concentrations present in the discharge. The variability in sampling results at the end of the discharge pipe for lead range from non-detect to 8 ppb.

The Department conducted a reasonable potential analysis for lead as described under WAC 173-201a-040 to determine surface water criteria for lead limits. Using historic flow data for Burnt Bridge Creek provided by Clark County, the Department calculated a chronic dilution factor of 8.7 and an acute dilution factor of 1.8 for the effluent at the point of discharge. Referencing nine quarters of testing results for lead, 8 ppb lead concentration was used as the maximum level detected. A reasonable potential analysis was performed resulting in a determination that the levels of lead present in the discharge do not pose a reasonable potential to violate water quality standards for the receiving stream. Therefore, a numeric effluent limit for lead has not been included in the permit but a mixing zone has been authorized.

The Department has authorized a mixing zone as described below in section C5. Because of the variability in sample results at the end of the discharge pipe, the Department has required that lead be monitored in the effluent. If future data indicate potential water quality impacts due to lead, the Department may modify the permit to include an effluent limit for lead and/or to require additional treatment.

2. Narrative Criteria

In addition to numerical criteria, "narrative" water quality criteria are used to limit acute and chronic toxicity, radioactivity, and other deleterious materials, and prohibit the impairment of the aesthetic value (WAC 173-201A-030) of the waters of the state. Narrative criteria describe the specific beneficial uses of each water body or water body segment in the state of Washington.

3. Description of the Receiving Water

The ground water treatment facility discharges to Burnt Bridge Creek. Burnt Bridge Creek is designated as a Class A receiving water in the vicinity of the outfall. Characteristic uses include the following:

> water supply (domestic, industrial, agricultural); stock watering; fish and shellfish: migration, rearing, spawning, and harvesting; wildlife habitat; and recreation: sport fishing; boating and aesthetic enjoyment; commerce and navigation.

Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses listed above.

4. Toxic Pollutants

Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards or from having water quality-based effluent limits.

5. Mixing Zone Authorization

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing water quality-based effluent limits. By estimating the concentration of various pollutants at the outer edge of "acute" and "chronic" mixing zones, the allowable discharge of a pollutant in a point source discharge can be determined. The concentration of pollutants at the edge

of these mixing zones may not exceed the numerical criteria for that type of zone. The Department has authorized the mixing zone to be as follows:

> The mixing zone will not extend in a downstream direction for a distance from the discharge port(s) greater than three hundred feet plus the depth of water over the discharge port(s) or extend upstream for a distance of over one hundred feet. It will not utilize greater than twenty-five percent of the flow and not occupy greater than twenty-five percent of the width of the water body.

6. Toxicity Testing

Unidentified sources of toxicity are not expected to be present in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

7. Human Health

The technology-based permit limits established by the permit will prevent violations of the human health criteria for pollutants identified in the waste stream. If the Department finds that this permit does not protect human health, the permit will be modified to incorporate new conditions as needed.

III. MONITORING AND REPORTING

Effluent monitoring, recording, and reporting are required (WAC 173-220-210) to verify the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring and testing schedule is detailed in the permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The following testing schedule has been proposed for this permit:

The Permittee shall monitor the wastewater according to the following schedule:

Tests	Sample Point[1]	Sampling Frequency[2]	Sample Type
Flow	Influent	1/quarter	Totaling
	Final Effluent	1/quarter	Flow Recorder
pH	Final Effluent	1/quarter	Grab
Benzene	Influent	1/quarter	Grab
	Final Effluent	1/quarter	Grab
BTEX[3]	Influent	1/quarter	Grab
	Final Effluent	1/quarter	Grab
TPH-G[4]	Influent	1/quarter	Grab
	Final Effluent	1/quarter	Grab
Total Lead[5]	Final Effluent	1/quarter	Grab
Chlorine[6] (total residual)	Final Effluent	1/quarter[7]	Grab

[1]The influent sample point is defined as the nearest accessible point prior to entrance into the treatment system and the final effluent sample point is defined as the nearest accessible point after final treatment and prior to actual discharge or mixing with other flows. Effluent sampling will coincide with influent sampling based on resident time of wastewater in the treatment system such that treatment system effectiveness may be evaluated.

[2]In the event of any non-compliance with effluent limitation, the sampling frequency for influent and final effluent tests shall be once/month until another twelve (12) months of compliance is demonstrated.

[3]BTEX shall be measured as the sum of benzene, ethylbenzene, toluene, and xylenes using EPA Method 8020 or approved equivalent method(s).

[4]TPH-G (Total Petroleum Hydrocarbons, gasoline-range) shall be measured using Ecology Method NWTPH-G.

[5]Total Lead shall be measured using EPA Method 239.2 or equivalent EPA approved method.

[6]Residual chlorine shall be measured using EPA Method 330.1.

[7]Residual chlorine analytical testing results shall be reported to Ecology for four quarter between July 1, 2003 and June 30, 2004. If test results are consistently non-detect, Time Oil Co. shall not longer need to sample and test for residual chlorine for the duration of the permit.

IV. OTHER PERMIT CONDITIONS

A. SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department if substantial changes are made to the facility.

B. TREATMENT SYSTEM OPERATING PLAN

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system (40 CFR 122.41(e) and WAC 173-220-150(1)(g) Permittee shall properly operate and maintain all facilities). An operation and maintenance manual was submitted as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). It has been determined that the implementation of the procedures in the Treatment System Operating Plan is a reasonable measure to ensure compliance with the terms and limitations in the permit.

C. OTHER SPECIAL CONDITIONS

The specific requirements listed in permit condition S3 are derived directly from federal regulations at 40 CFR 122.22, 122.41, 122.44, and 122.48.

D. GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all NPDES permits issued by the Department.

E. PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards, Sediment Quality Standards, or Ground Water Standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations

V. RECOMMENDATION FOR PERMIT ISSUANCE

This permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this permit have duration not to exceed June 30, 2008.

VI. REFERENCES

1. Model NPDES Permit for Discharges Resulting From the Cleanup of Gasoline Released From Underground Storage Tanks. EPA Office of Water Enforcement and Permits and Office of Underground Storage Tanks. June 1989.

2. METRO reports of monitoring of wastewater discharges at ground water remediation sites.

3. Environmental Protection Agency (EPA) 1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

4. EPA 1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

5. Discharge Monitoring Reports from permitted LUST sites, Ecology files.

VII. REVIEW BY THE PERMITTEE

A proposed permit was reviewed by the Permittee for verification of facts. Only factual items were corrected in the draft permit.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on July 14, 2002 and July 21, 2002 in *The Columbian* to inform the public that an application had been submitted and to invite comment on the re-issuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on October 9, 2002 in *The Columbian* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Patricia L. Martin
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, Washington 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6245 or by writing to the address listed above. This permit was written by Patricia Martin.

APPENDIX B--DEFINITIONS

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Class 1 Inspection--A walk-through inspection of a facility that includes a visual inspection and some examination of facility records. It may also include a review of the facility's record of environmental compliance.

Class 2 Inspection--A walk-through inspection of a facility that includes the elements of a Class 1 Inspection plus sampling and testing of wastewaters. It may also include a review of the facility's record of environmental compliance.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time

intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include ground water building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Daily Maximum Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

Monthly Average Discharge Limitation--The average of the measured values obtained over a calendar month's time.

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington state permit writers are joint NPDES/State permits issued under both state and federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral and large variations above or below this value is considered harmful to most aquatic life.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C – SITE MAP AND TREATMENT SYSTEM FLOW DIAGRAMS

FIGURE 1. SITE LOCATION MAP

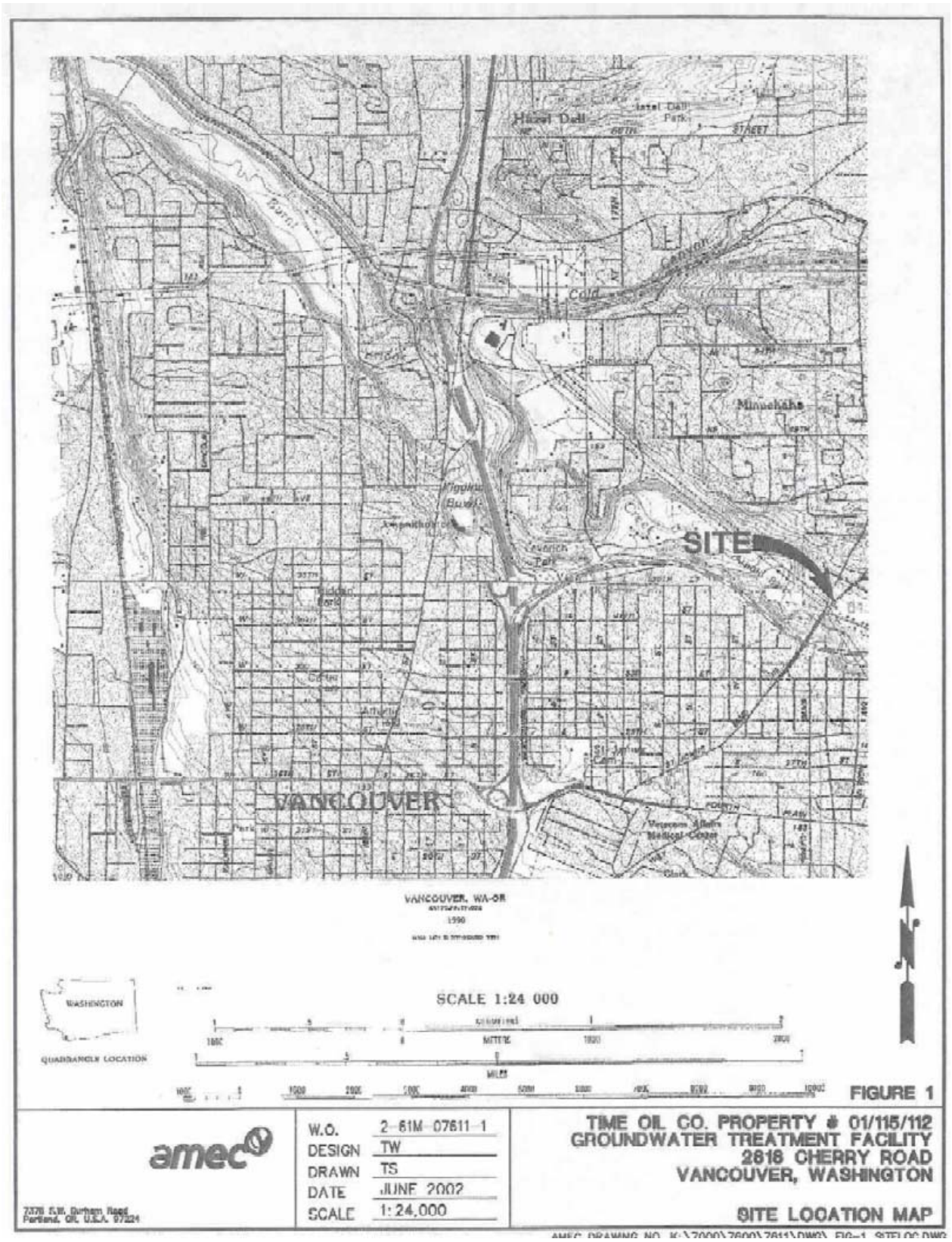


FIGURE 2 SITE PLAN

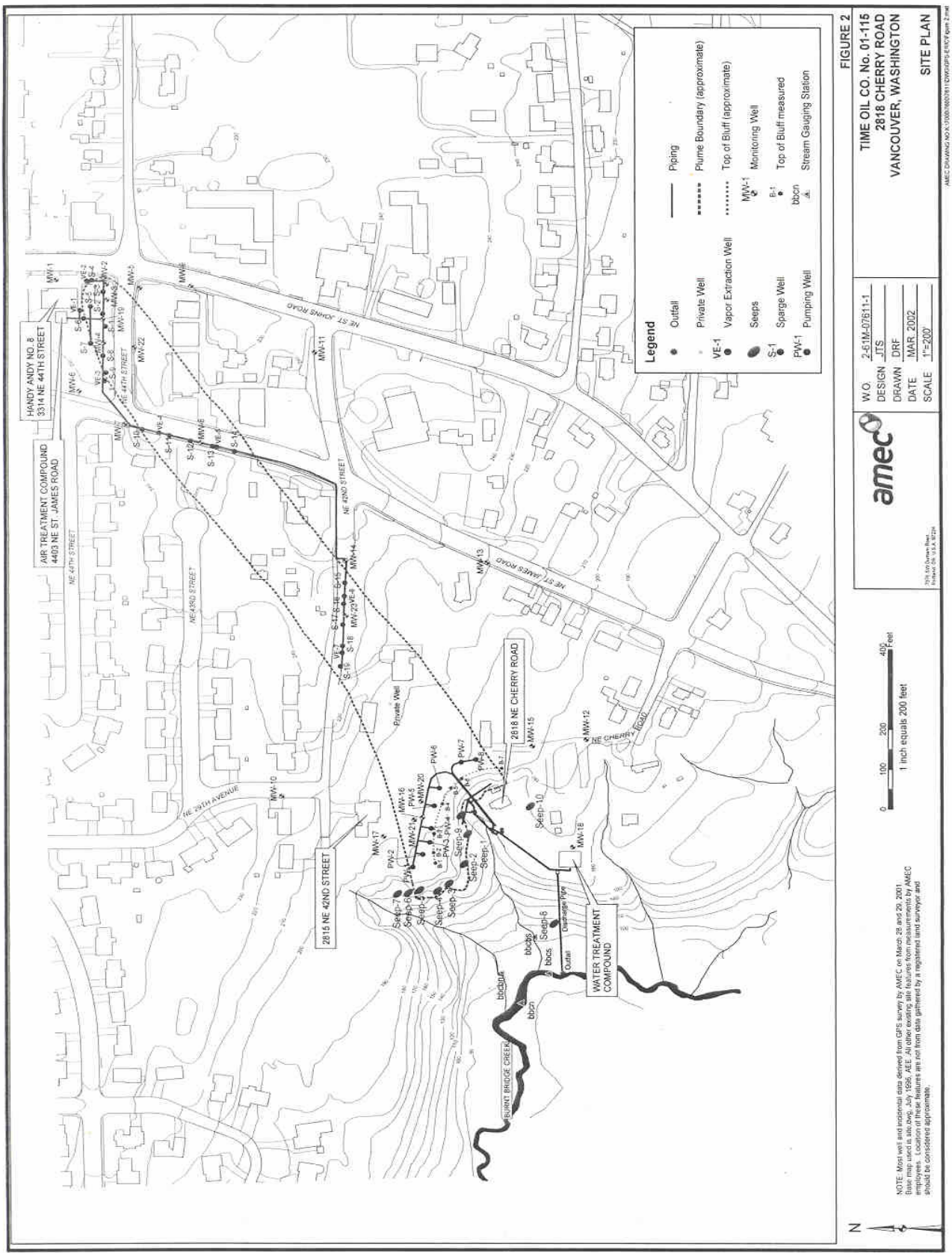


FIGURE 3 P & T SYSTEM WELLS AND TRENCHING

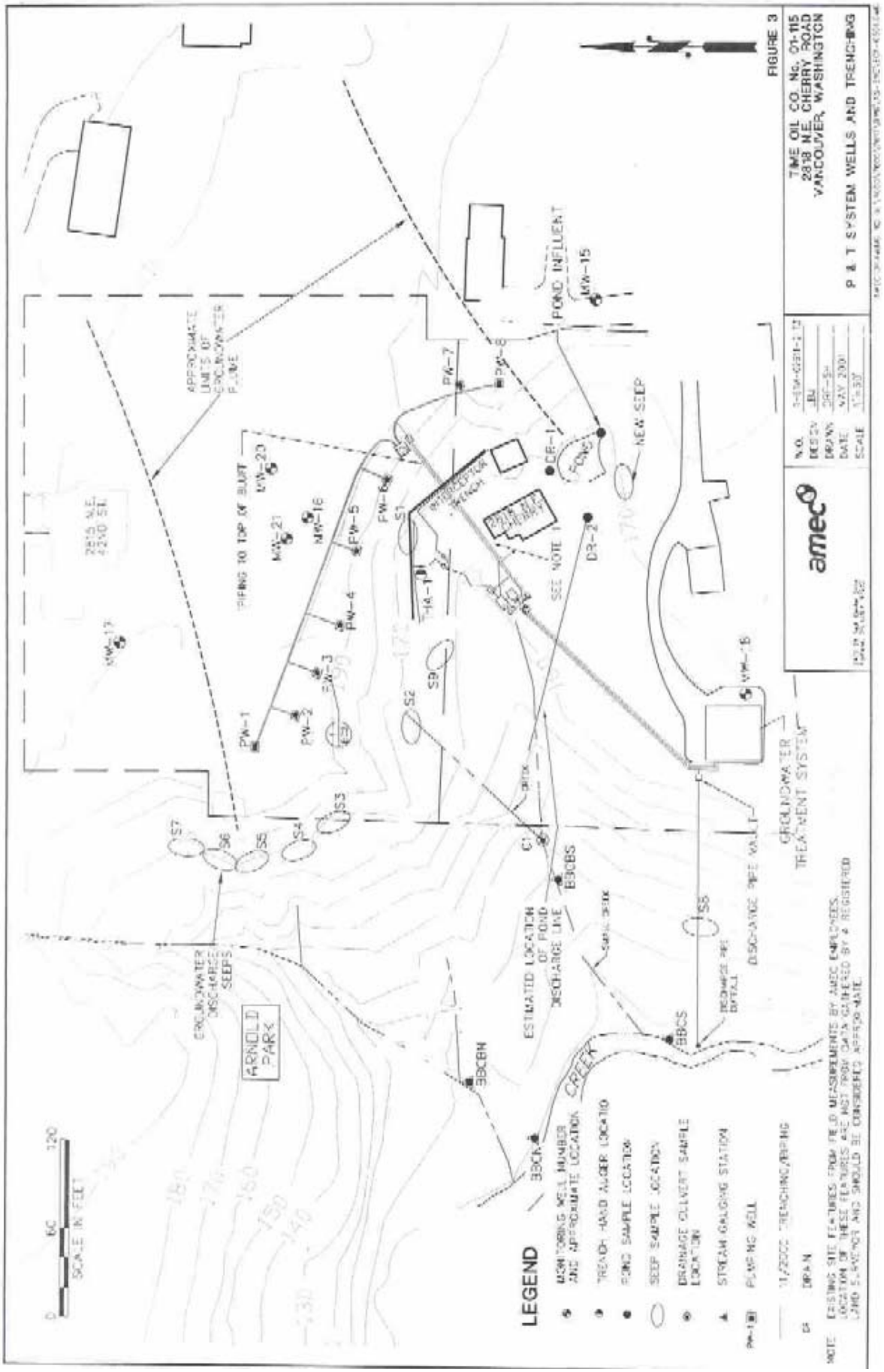
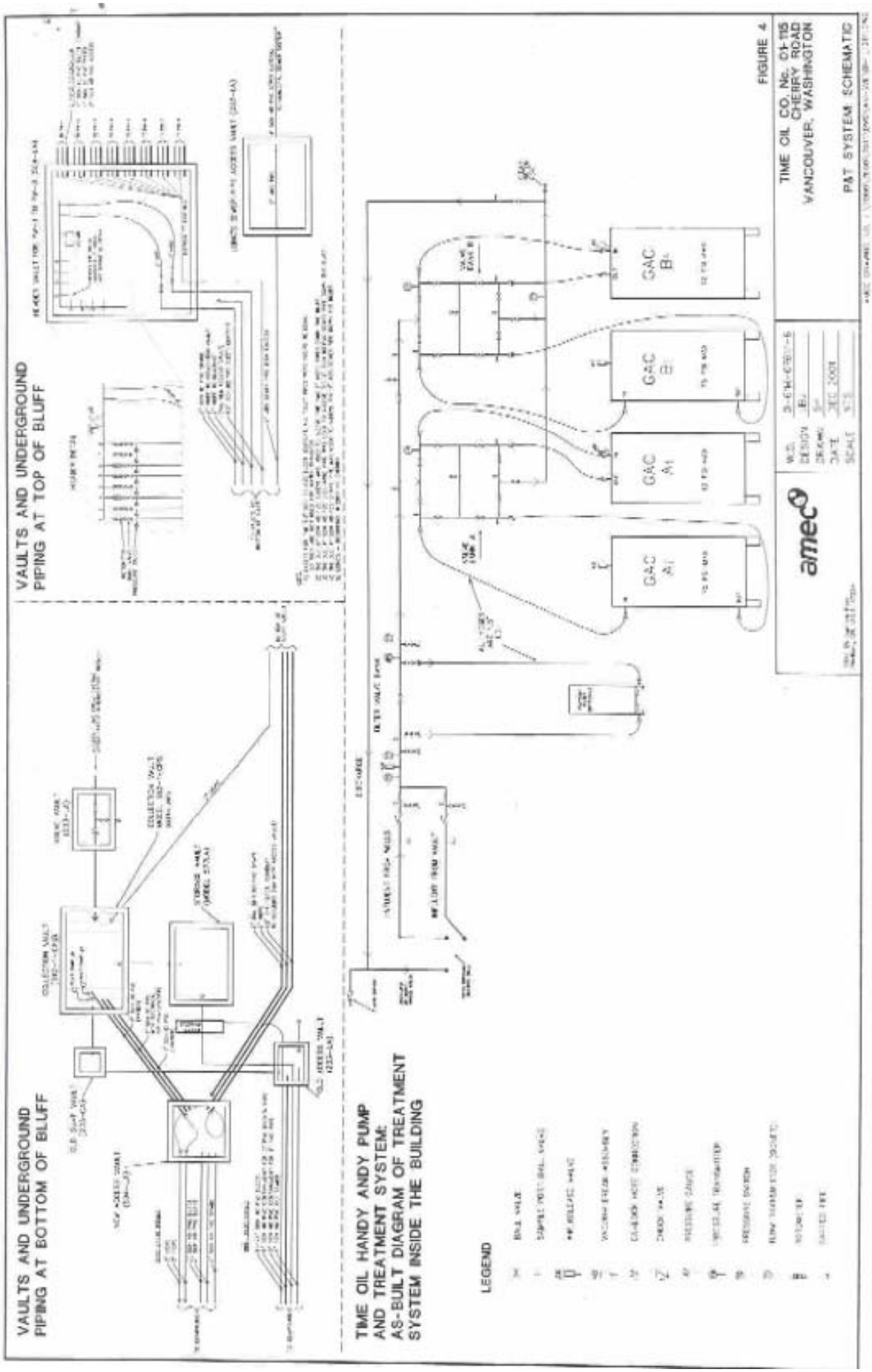


FIGURE 4 P & T SYSTEM SCHEMATIC



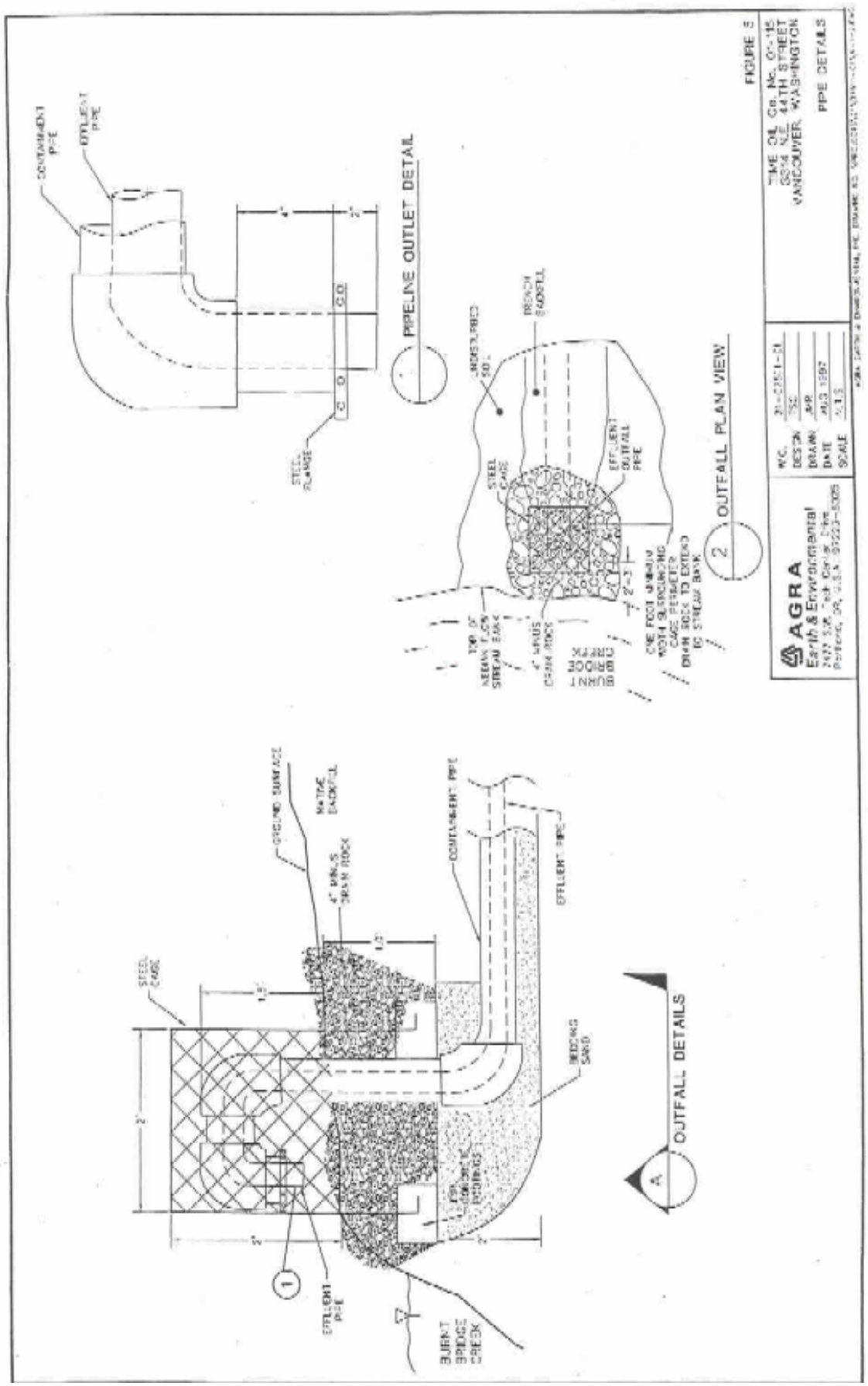


FIGURE 5 PIPE DETAILS

FIGURE 6 TYPICAL TRENCH DIAGRAM AND EFFLUENT PIPELINE DETAILS

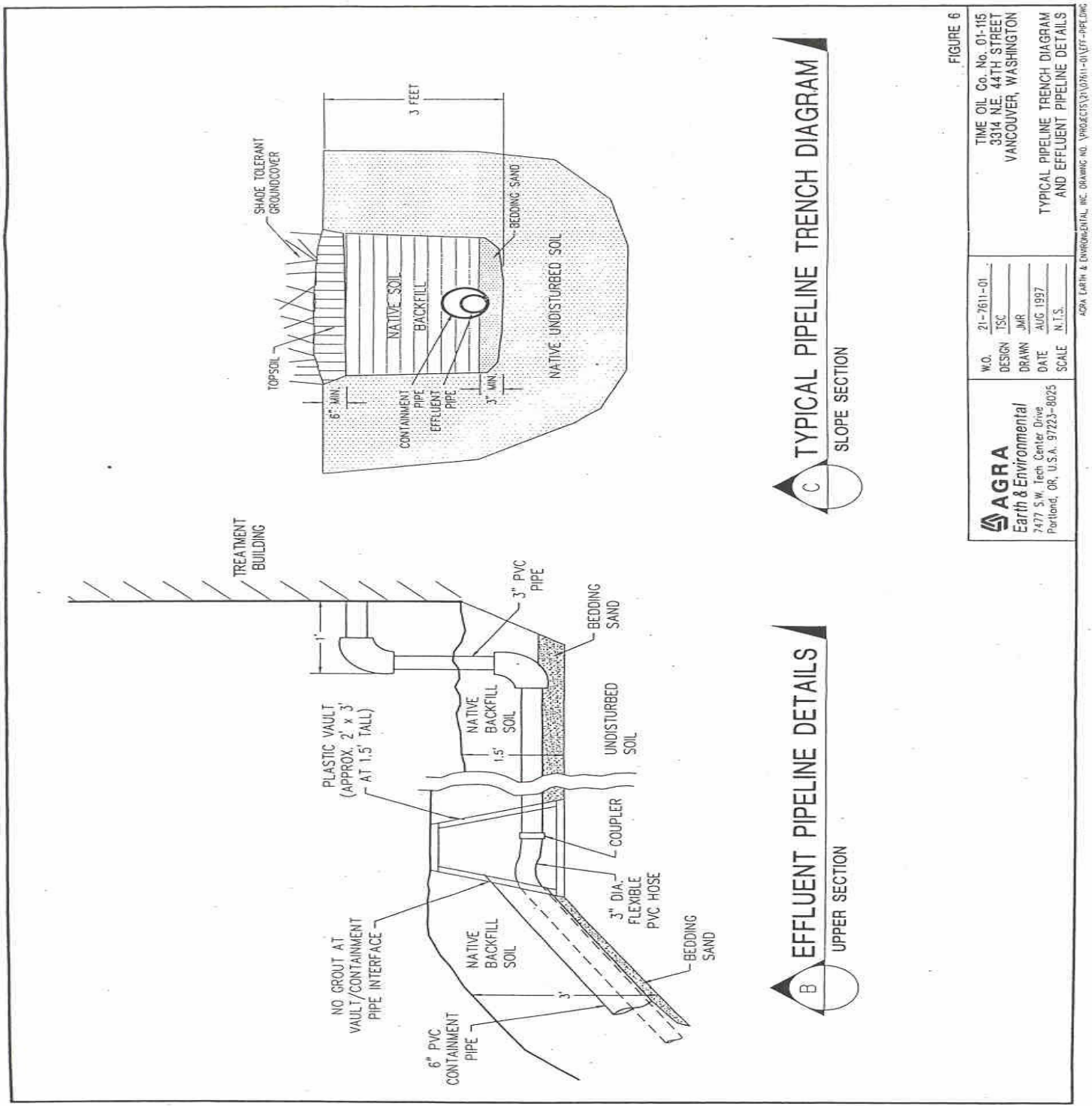


FIGURE 7
Effluent pH Compliance History

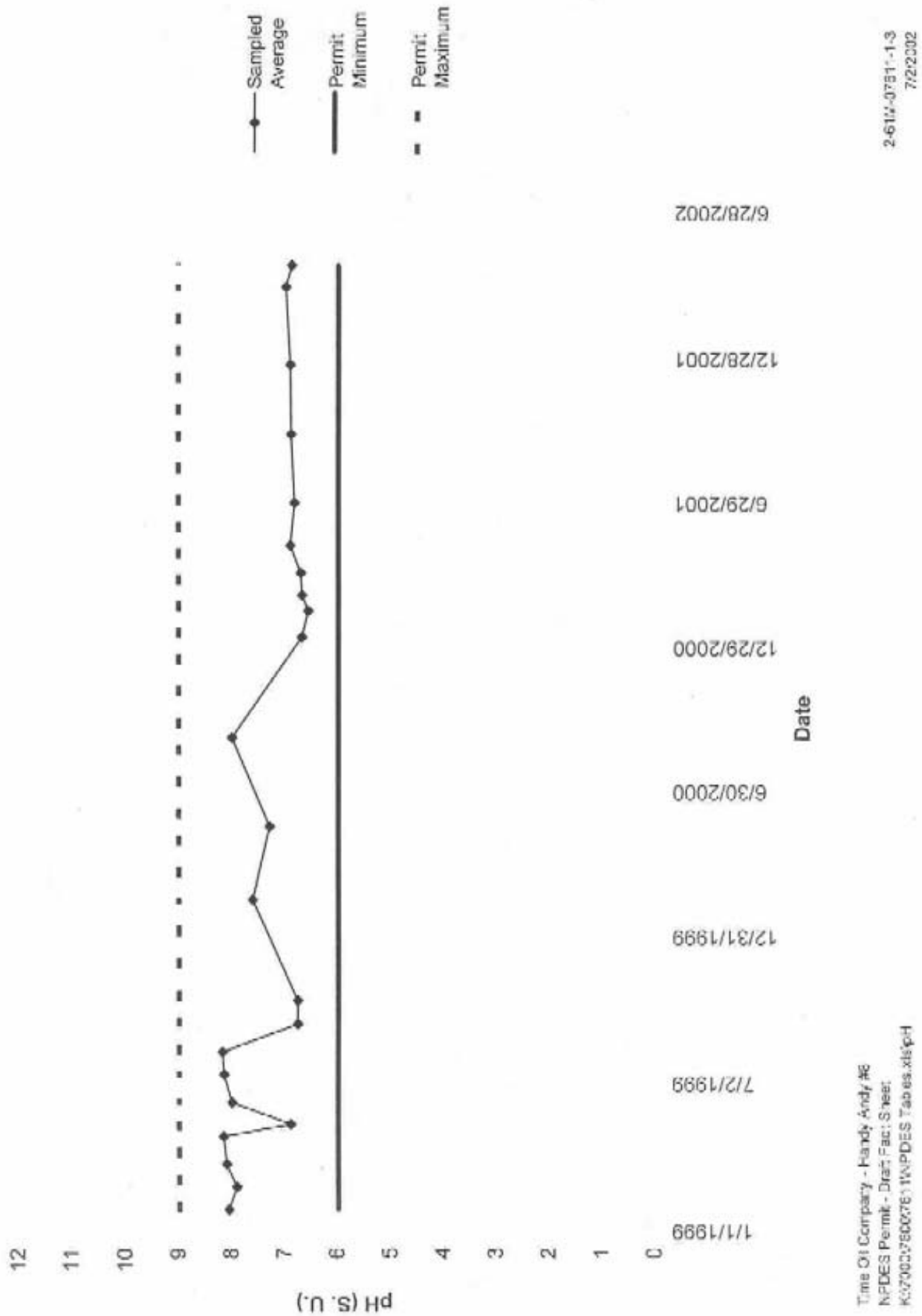
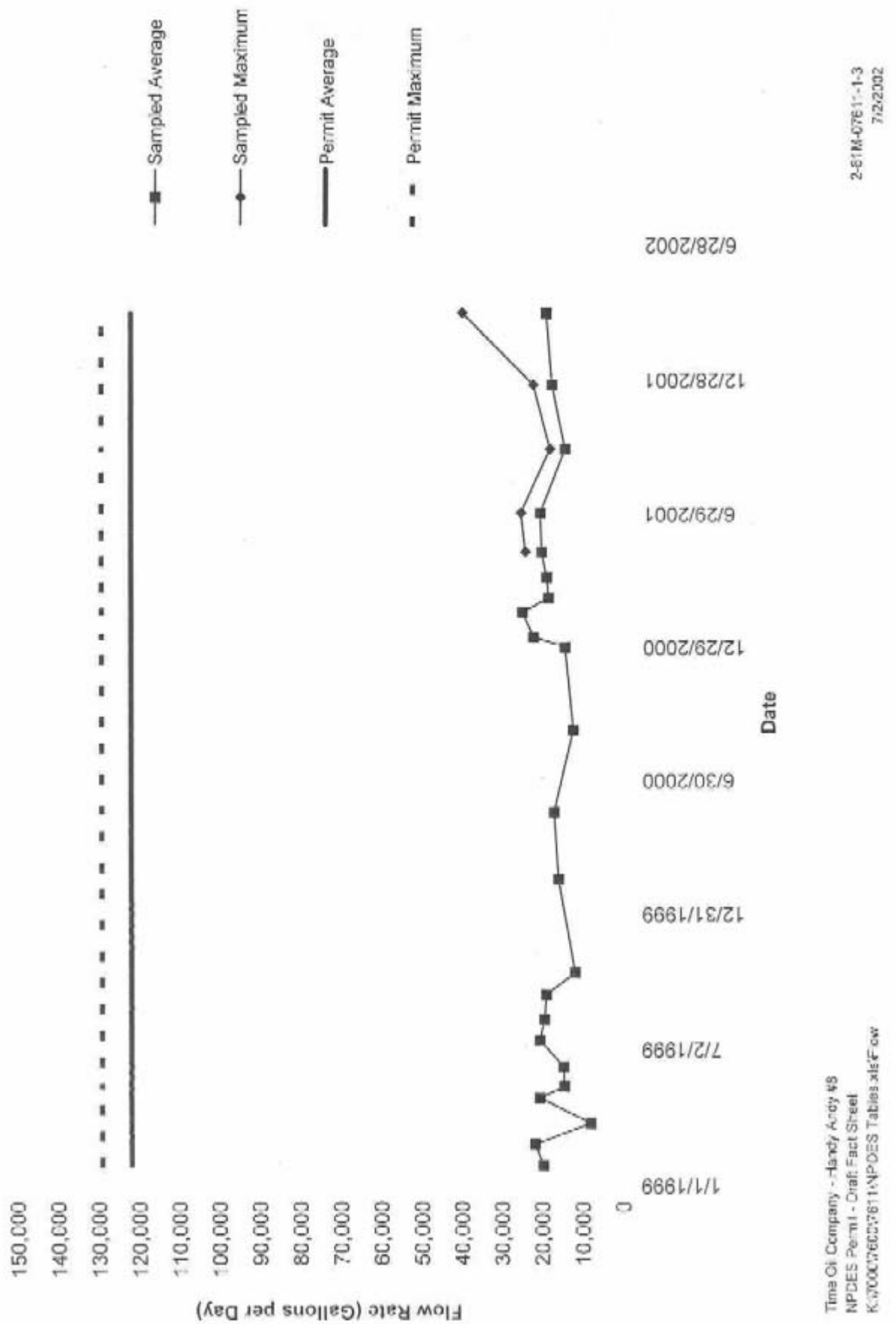


FIGURE 8
Effluent Flow Compliance History



APPENDIX D - RESPONSE TO COMMENTS

Ecology accepted comments on the draft permit over a 30-day period ending November 8, 2002. By the close of the public comment period, Ecology had received comments from the following interested parties:

- Billie Reed
- Joan Marie Geisler
- Vickie Sprague
- Carl Joiner
- Dawn Freeman

Comments and Responses follow:

Comment: The citizens that supplied comments by electronic mail requested a public hearing because they had a concern that the underground storage tanks at the site may still be continuing to leak.

Response: Ecology has received your request for a public meeting. Because the primary source of gasoline has been removed and due to insignificant public interest regarding this permit, a public meeting for this permit is not necessary.

The leaking underground storage tank system that was responsible for the release of gasoline into the environment was removed in January 1991. Since that time, approximately 2000 cubic yards of soil have been excavated and remediated. Also, two complex and very effective remedial systems have been installed at the site to remove gasoline contaminates from both soil and groundwater.

The extent of gasoline contaminated soil and groundwater has been well defined by an extensive site characterization. Time Oil Co. has installed two state-of-the-art remedial systems that are actively capturing and remediating the entire gasoline plume. All water that exits the site is tested to confirm that no contaminates have migrated down-gradient of the defined gasoline plume. The NPDES permit is an instrument that Ecology uses to insure that all treated water that is discharged from the site meet environmental cleanup levels.

There are numerous reports on this site stored in the Record Center of Ecology. All members of the public are welcome to review these records. Please request an appointment for a review by contacting the staff in the Record Center at (360) 407-6365.